WHAT IS CLAIMED IS:

1.   An electronic paper reading device comprising:

a reading component for optically reading an electronic paper which is filled out by hand, in a state in which a first image which has been recorded on the electronic paper in advance, being displayed;

a recognition component for recognizing the first image; and

an extracting component for extracting image data of a second image that represents contents with which the electronic paper is filled out by hand, based on a recognizing result of the recognition of the first image by the recognition component, from a result of the reading by the reading component.

2.   The device of claim 1, wherein

the recognition component recognizes the first image by obtaining image data of the first image, and

the extracting component extracts image data of the second image by estimating the first image in accordance with the reading result by the reading component based on the image data obtained by the recognition component, and removing the first image, which is estimated from an image represented by the reading result.

3.   The device of claim 2, wherein

identification information for identifying image data of the first image or a storage location of the image data is recorded on the electronic paper, and

the recognition component obtains the image data by reading the image data from the electronic paper or identifies the storage location of the image data based on identification information read from the electronic paper, and obtains the image data from the identified storage location.

4.   The device of claim 2, wherein the extracting component removes the estimated first image by converting, among respective image pixels of the image represented by the reading result, densities of image pixels which correspond to the estimated first image and whose density difference from corresponding image pixels of the estimated first image is less than a predetermined value or densities of image pixels the densities of which are within a density range which has been defined in accordance with the estimated first image, to a density of the electronic paper in a state in which an image is not recorded thereon.

5.   The device of claim 1 further comprising a control component which recognizes identification information for identifying the electronic paper which is filled out by hand, and which associates the obtained image data of the second image with the identification information and manages the image data.

6.   The device of claim 5, further comprising a detection component for detecting a relationship between an orientation of the electronic paper or the first image, and that of the second image, wherein, based on the relationship detected by the detection component, the control component controls the image data of the second image to orient the first image and the second image in the same direction when both the first image and the second image are recorded on the electronic paper.

7.   An electronic paper reading device comprising:
      a delete control component for deleting a display of a first image from an electronic paper which is filled out by hand in a state in which a first image which has been recorded on the electronic paper in advance, is being displayed; and
      a reading component for obtaining image data of a second image representing contents with which the

electronic paper is filled out by hand, by optically reading

the electronic paper from which the display of the first

image has been deleted by the delete control component.

8. The device of claim 7, further comprising a control

component which recognizes identification information for

identifying the electronic paper which is filled out by

hand, and which associates the obtained image data of the

second image with the identification information and

manages the image data.

9. The device of claim 8, further comprising a detection

component for detecting a relationship between orientation

of the electronic paper or the first image, and that of

the second image, wherein, based on the relationship that

is detected by the detection component, the control

component controls the image data of the second image to

orient the first image and the second image in the same

direction when both the first image and the second image

are recorded on the electronic paper.

10. An electronic paper reading device comprising:

a reading component for optically reading an

electronic paper which is filled out by hand in a state

in which a first image which is recorded in advance on the

electronic paper is being displayed, wherein

the electronic paper is filled out by hand by using ink having characteristics such that a reflectance of the ink is different from that of the electronic paper within a predetermined wavelength region in which a difference of at least one of a reflectance and a light emitting energy between a portion on the electronic paper at which the first image is recorded and a portion on the electronic paper at which the first image is not recorded thereon is less than a predetermined value, and

the reading component obtains image data of a second image that represents contents with which the electronic paper is filled out by hand by optically reading the electronic paper by using a sensor which is sensitive to the predetermined wavelength region.

11. The device of claim 10, further comprising a control component which recognizes identification information for identifying the electronic paper which is filled out by hand, and which associates the obtained image data of the second image with the identification information and manages the image data.

12. The device of claim 11, further comprising a detection component for detecting a relationship between orientation

of the electronic paper or the first image, and that of

the second image, wherein, based on the relationship that

is detected by the detection component, the control

component controls the image data of the second image to

orient the first image and the second image in the same

direction when both the first image and the second image

are recorded on the electronic paper.

13.   An electronic paper reading system comprising:

an electronic paper reading device; and

a control device,

wherein the electronic paper reading device and the

control device are connected to each other via a network

so as to be able to communicate with each other,

the electronic paper reading device including:

a reading component for optically reading an

electronic paper which is filled out by hand, in a state

in which a first image which has been recorded on the

electronic paper in advance is displayed;

a recognition component for recognizing the first

image; and

an extracting component for extracting image data of

a second image that represents contents with which the

electronic paper is filled out by hand, based on a

recognizing result of the first image by the recognition

component and a reading result due to the reading component, and

wherein the control device recognizes identification information for identifying the electronic paper which is filled out by hand, and associates the obtained image data of the second image with the identification information and manage the image data.

14. An electronic paper reading method comprising the steps of:

(a) optically reading an electronic paper which is filled out by hand in a state in which a first image which has been recorded on the electronic paper in advance, is being displayed;

(b) recognizing the first image; and

(c) extracting, from a result of the reading in the step (a), image data of a second image that represents contents with which the electronic paper is filled out by hand, based on a recognized result from the first image in the step (b).